

REMARKS

Claims 1, 3-8, 10-14 and 16-23 are pending. The amendments to Claims 1 and 8 are supported in the original specification among other places on p.16, lines 16-25. No new matter is added.

Claims 1,8, 16,17,18, and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Ditto (USPN 4076788). (Office Action, page 2)

Independent Claims 1 and 8 have been defined to recite *injecting* molten resin, which is nowhere shown in Ditto. Ditto discloses in col.4, lines 23-26:

FIG. 1 depicts the beginning of the process after a slab of sheet molding compound 36 (e.g., FRP sheet) has been inserted between the open dies 4-6 and atop the die 6. Ditto charges the mold with a preformed slab of sheet and does not inject molten resin into the mold.

For at least this reason, Ditto cannot legally anticipate the invention now claimed.

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditto (USPN 4076788). (Office Action, page 2)

Claims 19 and 20 depend from Claims 1 and 8 and as previously explained, nowhere does Ditto disclose or teach injecting a molten resin into the mold with an injection machine. For at least this reason, Ditto cannot be held to create a *prima facie* rejection of obviousness over the invention now claimed.

The invention disclosed by Ditto comprises clamping a slab of a substrate which has been placed between the preheated dies to effect its flow throughout the mold cavity, forming a space between the mold and the substrate by opening the mold, then injecting skin-forming material therebetween, and applying a pressure to one of the mold to form a skin. According to the description on column 4, lines 23 to 54 of Ditto, a substrate in the form of a slab is placed between the dies, and then pressed thereto. Then, at the time when the formation of the substrate in the

predetermined shape is completed, a coating material is injected to a space formed by retracting slightly movable die between the surface of the substrate and the surface of retracted movable die.

Another difference of the claimed invention lies in the control of the pressure given to the mold at the time of forming a substrate from a molten resin and the one given to the mold at the time of forming coating layer practically at the same level, thereby the deformations of the mold at both times are kept within practically the same level.

The state of the art prior up to the present invention was as follows: If one employs the same pressure for clamping the mold at both the forming step of a substrate in the injection molding and the forming step of a coating layer thereon, the problems discussed below arose:

The clamping force to be used for the formation of a substrate according to injection molding is quite higher than that of press molding wherein a thermosetting resin is used. If one wants to form a coating layer by using such a higher clamping force for the step of forming a coating layer on the substrate, it is quite difficult to effectively prevent coating material from leaking out of the mold. Thus, in the claimed invention, the step of forming a substrate is divided into two sub-steps; the first one being a step of injecting a molten resin into the cavity, and the second one being a step of forming a predetermined shape. Then, the clamping forces are controlled for the first and second sub-steps, independently.

In the first sub-step (= the first step referred to on page 19, lines 10 to 15 of the present specification), a higher clamping force is employed, and, in the second sub-step (= the second step referred to on page 19, line 20 to page 20, line 9 of the present specification), a lower clamping force is employed. The level of the clamping force to be employed at the second sub-step is adjusted to the level of the clamping force to be used for the formation of the coating layer. By employing thus divided clamping forces, it becomes possible to employ practically the same level of the clamping force both for the second sub-step at the injection molding of a substrate and the forming step of coating layer, thereby preventing the leakage of a coating material from the mold at the time of clamping the mold after injecting a coating material.

This process is illustrated in the attached charts for clarity. Ditto does not teach or suggest such a strict control of the pressure in any means.

The method disclosed by Ditto is directed to a so-called press-molding method comprising giving a pressure to a substrate placed in a cavity to form a predetermined shape. The invention disclosed by Ditto is actually not relevant to the invention now claimed.

While the rejection alleges that clamping force is a result effective variable, however, the control of the pressure in such a strict manner is not conceivable by just conducting trial and error experiment, without knowing what is the most important factor to achieve the uniform thickness of coating layer. In this respect, please see the explanation on page 6, line 5 to page 7, line 5, and page 40, line 8 to page 41, line 5 of the present specification.

Pressure Employed Present Invention and 800psi Disclosed by Ditto

The "MPa value in terms of pressure per unit" used in the present claims is a value given by dividing the clamping force by the projected area of the mold cavity, as can be taken from the description on page 7, lines 10 to 13 of the present specification.

On the other hand, the value "800psi" disclosed by Ditto is not convertible to "MPa value in terms of pressure per unit" in the present invention.

Actually, it cannot be understood what the pressure 800 psi stands for. According to the description of Ditto, at most one may interpret that the pressure 800 psi means the one which was given by the cylinder 12 and was measured by the gauge 14, if so, one can not determine the MPa value in terms of pressure per unit from this value.

Thus, there is no direct way to compare the "MPa value in terms of pressure per unit" in the present invention and the value "800psi" used by Ditto.

In light of the above differences, it is respectfully requested that the rejection be reconsidered and withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

Dated: March 29, 2010

Respectfully submitted,

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Encls: Explanatory diagrams (4 pages)